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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,746	04/15/2004	Jian Liu	LIUJIAN0302	8498
7590 09/01/2006			EXAMINER	
Bo-In Lin 13445 Mandoli Drive Los Altos Hills, CA 94022			HUGHES, DEANDRA M	
			ART UNIT	PAPER NUMBER
			3663	

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/825,746

Applicant(s)

LIU, JIAN

Examiner

Deandra M. Hughes

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 16-23 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6 is/are allowed.
- 6) ☒ Claim(s) 5, 7-10 and 14 is/are rejected.
- 7) ☒ Claim(s) 11-13 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 16-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Further, Applicant elected Species A (figure 2). This Election was made in the paper dated 7/24/06.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election **without** traverse (MPEP § 818.03(a)).

### ***Drawings***

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the gray areas of the graphs are difficult to read. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 5, 7, and 14 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a diameter equal to 35 micrometers, does not reasonably provide enablement for all diameters greater than 35 micrometers. The specification does not enable any person skilled in the art to which it pertains, or with

which it is most nearly connected, to make the invention commensurate in scope with these claims. In order to overcome this rejection, Applicant must claim an upper limit on the diameter range.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5, 7, and 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular the claim of a diameter greater than 35 micrometers is indefinite.

Would a diameter of 50 micrometers apply to the disclosed invention?

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Epworth (US 5,608,571 published Mar. 4, 1997).

Epworth discloses:

- a 1<sup>st</sup> laser gain medium (e.g., fig. 4, #52, the gratings #53 and #54 constitute a laser resonator cavity) *for amplifying a laser projection for projecting to a set of Bragg gratings (#53 and #54) for reflecting a grating-specific pulse distortion-optical signal; and*

- a circulator (#50) *for transmitting said grating-specific pulse-distortion-reduced optical signal to*
- a second gain medium (#55) for further amplification (signal circulates from #52 to #55).

The Examiner considers the claim language identified in italics above to be a functional limitation, i.e. intended use. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone. Since the structural limitations have been met by the prior art, the Examiner has reason to believe that the function limitation can be performed by the prior art structure. See MPEP 2114.

Further, please note that a grating-specific pulse distortion optical signal *itself* is not claimed. Rather, *the reflection* of a signal of this type is claimed. If the prior art grating is capable of performing this reflection, then the claim limitation has been met by the prior art.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epworth (US 5,608,571 published Mar. 4, 1997) in view of Mizrahi (US 5,673,129 published Sep. 30, 1997).

With regard to claim 9, Mizrahi does not specifically disclose the claimed modulated diode laser source. However, Mizrahi teaches a modulated diode laser source modulated via voltages within a threshold range (col. 7, lines 10-27). It would have been obvious to one of ordinary skill in the art (e.g. an optical engineer) at the time the invention was made to apply the modulated diode laser source of Mizrahi to the apparatus of Epworth for the advantage of a wavelength stabilized source, as is specifically taught by Mizrahi.

With regard to claim 10, Epworth discloses that the laser gain mediums are EDFs (col. 2, line 51).

***Allowable Subject Matter***

11. Claims 1-4 and 6 are allowed.

12. Claim 7 would be in condition for allowance if the USC 112 1<sup>st</sup> and 2<sup>nd</sup> paragraph rejections outlined above were overcome by claiming an upper limit on the diameter range.

13. Claims 11-13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claims 5 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if the USC 112 1<sup>st</sup> and 2<sup>nd</sup> paragraph rejections outlined above were overcome by claiming an upper limit on the diameter range.

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15. The following is a statement of reasons for the indication of allowable subject matter.

The prior art does not teach or make obvious *a circulator for transmitting a claimed grating specific pulse distortion reduced optical signal* in conjunction with the other limitations of the claim.

### **Conclusion**

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cho, Cooper, Gu, Gunning, Han, Harter, Jung, Kersey, Mizrahi, Richardson, Tsadka, Yamada, and Yao disclose modulated laser sources.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M. Hughes whose telephone number is 571-272-6982. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

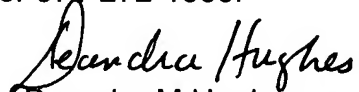
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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Deandra M Hughes  
Primary Examiner  
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